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# Performance of the Higher Education Sub-Sector in Ethiopia

By

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## Abstract

*Ethiopian higher education sub-sector has gone through a number of reforms during its more than six decade history. The sector recently becomes open for investment by the private sector. Major changes, in terms of budget allocation, enrollment in undergraduate and graduate programs, graduation and teaching staffs took place during the past one decade. This study attempted to study the trends in the sector based on secondary data from different official sources. The trends show that the sector is undergoing a major expansion and massification. The study shows that the sector has gone through these changes in a relatively short time. After the analysis of the recent trends in the sector the study makes some suggestions with respect to gender equity, policy stability and relevance and quality of higher education to be given appropriate attention so that the sector could have a healthy growth.*

**Key words:** Ethiopia, Higher Education, Tertiary Education, University

## Introduction

Education in general and higher education in particular is considered as one of the most effective pathways out of poverty (Nwuke 2008). Bloom

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<sup>b</sup> I would like to acknowledge that the paper has benefited from the constructive comments of Dr. Degnet Abebaw

*et al* (2005) argues that higher education affects economic growth through private and public channels. The private channels include generating better employment opportunity, higher income, greater ability to save and invest, improved health, and better quality of life. Notwithstanding the fact that these personal gains also benefit the society as a whole, there are also public gains in terms of increased tax revenue, increased consumption, improve technology transfer, development of new tools and skills, entrepreneurship and job creation, as well as its spillover effect in terms of knowledge transfer to non-graduate co-workers.

Researchers argue that the contributions of higher education to growth and development have been under appreciated, particularly by African countries. Higher education affects economic growth through a number of channels. These channels include research and development towards adapting to existing technologies and innovating new ones, improve competitiveness, better governance, teaching teachers for primary and secondary levels as well as transforming structure of production. Previously studies put higher education in third place behind primary and secondary education based on its returns on investment. Consequently World Bank and many African countries neglected the sector. But recent studies confirm the importance of higher education in achieving and sustaining growth. As a result the sector has started to get the attentions that it deserved (Kimenyi 2011; Diagne and Diene 2011; Ajakaiye and Kimenyi 2011)

The history of elite education in Ethiopia goes back as far as some 1,700 year, which is linked to the Orthodox Church (Saint 2004). But modern tertiary education is known to begin in the 1950s with the establishment of Trinity College, which later become the Addis Ababa

University College. The university college grew to be a university in 1961 with the formation of Haile Selassie I University. The university was formed by organizing different colleges and institutions under the university. After the fall of the imperial regime in 1974, the university was renamed as Addis Ababa University (AAU). AAU is the one that started post-graduate programs in Ethiopia in 1978 (Amdissa 2009).

During 1974 to 1991 the military government Derg ruled the country. Among the developments that took place during the Derg was the ratification of a proclamation that established the Commission for Higher Education (CHE) in 1977. The proclamation repealed AAU's charter and transferred the responsibilities of the chancellor and the Board of Governors to CHE. The achievements of CHE in particular and the government in general include the establishment of new and specialized institutes in the areas of health science, water technology as well as management sciences (PMGSE 1983; Demissu 2008). These institutes include the Institute of Health Science in Jimma, Institute of Water Technology in Arbaminch and Technical Teachers College at Nazreth<sup>42</sup>. The small semi-private institute that was run by a religious organization was also nationalized and upgraded into Asmara University<sup>43</sup>. In addition, Alemaya College of Agriculture was upgraded into an agricultural university, polytechnic institute of Bahirdar, agricultural vocational schools at Jimma and Ambo, as well as Commercial School in Addis Ababa were upgraded into junior colleges (Demissu 2008).

Different units of Addis Ababa University were also opened during the Derg period. The units include the Institute of Language studies, Faculty

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<sup>42</sup> These institutes have been upgraded into universities by the current government.

<sup>43</sup> Asmara University is located in Eritrea, which is separated from Ethiopia since 1993 as an independent nation.

of Veterinary Medicine, Awassa College of Agriculture, College of Teachers Education in Baherdar, School of Information Studies for Africa and the School of Graduate Studies. Post-graduate programs were also started during this period. The government had also prepared feasibility studies for the establishment of three regional universities in Jimma, Awassa and Baherdar<sup>44</sup> but failed to implement them due to lack of resources. The student population at the beginning of the period was around 11,000 for both full-time and extension students. This figure reached more than 29,000 (of which some 503 were graduate students) by the year 1989 (Demissu 2008).

Following the fall of the Derg regime in 1991, the education sector went through major reforms. The Transitional Government of Ethiopia (TGE), which replaced the Derge, introduced its Education and Training Policy (ETP) in 1994. Accordingly, the higher education sub-sector became open to the private sector (Amdissa 2009). As a result many private higher education institutes started operating in the sector. In this respect, the then Unity College (currently Unity University) became the first privately-owned institute of higher education in Ethiopia. In addition to opening the higher education sector to the private sector, the government also reorganized the existing different colleges and institutions of AAU into independent universities.

Despite more than fifty years history, the higher education sub-sector did not have a comprehensive Higher Education Proclamation for a long period of time. In fact, the first higher education proclamation was enacted in 2003. More recently, this proclamation has been revised and replaced by the Higher Education Proclamation of 2009. This study attempts to evaluate the

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<sup>44</sup> They were implemented later by the FDRE government.

performance of higher education in Ethiopia by particularly focusing on the recent decade. Data from the educational statistical abstracts of the Ministry of Education, federal budget proclamations, human development index and other sources have been used to evaluate the trends of enrollment, graduation, budget allocation and composition of teaching staffs. The analysis is conducted for both public and private institutions.

The remaining parts of the paper are organized as follows. Section 2 presents policy related backgrounds. In sections 3 the sectorial development with respect to number and distribution of institutions is presents. Section 4 focuses on the progresses made with regard to budget allocation, teaching staff, enrollment, and graduation. Finally some concluding remarks are forwarded in section 5.

## **Background**

According to Wagaw 1990 (as cited by Saint 2004), Ethiopian higher education institutions strove to maintain international standards. But the cost was high, with wastage rates approaching 40 percent in the late 1960s. He described their academic organization as somewhat more American and less British unlike most higher education systems in East Africa. Following the fall of the imperial rule, interventions in university affairs by the Derg government expanded. The involvements include security surveillance, repression of dissent, mandated courses on Marxism, prohibition of student organizations, appointment of senior university officers and control of academic promotions. As a result the higher education system became regimented in its management, conservative in its intellectual orientation, limited in its autonomy, short of experienced academic staff, declining educational quality, weak research output and poorly connected with the

international higher education community (Saint 2004). In addition the institutions were overcrowded, located only in few places and had limited research capacity (FDRE 1994).

According to the Education and Training Policy (ETP) of the government of Ethiopia, higher education institutions will enable students to become problem-solving professional leaders. The institutions are also expected to be research oriented (FDRE 1994). The policy document also states that educational management will be democratic, professional, coordinated, efficient and effective, and will encourage the participation of women. Furthermore, institutions will be autonomous in their internal administration and in the designing and implementation of education and training programmes, with an overall coordination and democratic leadership by boards or committees, consisting of members from the community (society), development and research institutions, teachers and students (Ibid).

The education sector development is guided by a twenty year program called the Education Sector Development Program (ESDP). The program is being rolled out in phases. The first phase, ESDP-I covered the period 1997 to 2001. ESDP-I had only a little to say about higher education (Amdissa 2009). Even though ESDP-I hasn't said much about the sectors, higher education witnessed rapid expansion during the period. Four new universities-Mekelle, Jimma, Bahir Dar, and Debu – were established through amalgamating and elevating the status of the existing colleges and institutions. Five new, private and nongovernmental higher education institutions were also accredited up to 2001 (MoE 2002b).

The first higher education proclamation of Ethiopia was introduced in 2003, during the second phase of the program, ESDP-II. ESDP-II run from 2002 to 2005. It aimed, among other things, to meet the qualitative and quantitative demand for trained manpower and build capacity within the education system for sustainable development. Distance education was also given attention as a tool for promoting formal and non-formal education (Amdissa 2009). Massive expansion plans, both in terms of enrollment and programs, were made for the sector during ESDP-II. The plan also suggested radical and comprehensive changes in management and administration reform in order for institutions to achieve higher quality and greater efficiency. Higher Education Proclamation was one of the major goals of ESDP-II with regard to the sector, and it was ratified in 2003 (MoE 2002b; FDRE 2003).

The proclamation gave provisions for the establishment of Education Relevance and Quality Follow-up Agency and Higher Education Strategy Center. The Education Relevance and Quality Follow-up Agency is responsible for supervising quality and relevance of higher education. The agency was given the power to ensure standard, relevance and quality in any institution in the country. It was also responsible for ensuring for programs in any institute to be in line with economic, social and other appropriate policies. The Higher Education Strategy Center on the other hand was established as the 'brain center' for the sector. It was responsible to formulate mission and strategy in order to make higher education compatible with manpower needs and policies with due consideration to global situation (FDRE 2003).



Higher education went through a rapid expansion during the implementation of ESDP-I and ESDP-II. In addition to the then existing two (Addis Ababa and Alemaya) universities, six additional universities (Mekelle, Jimma, Bahir Dar, Dehub, Gonder and Arbaminch) were established. As a result of these new expansions and upgrading, the intake capacity of the public higher education institutions has increased from 9,067 in 1996/97 to 31,997 in 2004/05. However, with a tertiary level gross enrollment rate (GER) of 1.5 %, Ethiopia still lagged behind the 3% average for Sub-Saharan Africa (MoE 2005b).

ESDP-III set several goals based on the government's top priorities as set by the Sustainable Development and Poverty Reduction Program (SDPRP). ESDP-III set the following goals for the period 2005/2006 – 2010/2011, regarding higher education, develop responsible and competent citizens to meet qualitative and quantitative demand for highly trained labor, ensure democratic management and governance in higher education system, set up cost effective, efficient and result oriented system and develop the volume, quality and relevance of research and consultancy services which are necessarily directed to the needs of the country (MoE 2005b).

During ESDP-III, it was planned to expand the capacity of the existing eight universities to accommodating 8 – 10 thousands additional students. It was also planned to establish/upgrade thirteen higher education institutions into universities. These institutions were planned to be established in Dessie/Kombolcha, Debrebirhan, Debreworkos, Nekemte, Bale-Robe, Nazareth, Sodo, Dilla, Mizan/Tepi, Jijiga, Semera, Dire Dawa and Axum. It was also planned to increase the intake capacity of public institutes under MoE to 110 thousand per annum. Incentive for private

institutions, such as land provision, tax exemption, provision of technical support and short-term trainings, were also proposed. Increasing the capacity in terms of intake capacity and diversity of post-graduate programs was also given increased attention in order to meet teachers need at higher education institutes in the country. Employment of expatriate academic staffs was taken as a measure to fill the gap in the short term (MoE 2005b).

During ESDP-III, the first higher education proclamation (Proclamation No. 351/2003), which was ratified in 2003, was revised and replaced in 2009 by higher education proclamation No. 650/2009. Accordingly the scope of higher education covers all levels including and beyond undergraduate degree by re-grouping diploma level trainings into technical and vocational trainings. The revision also gave discretion for MoE to grant higher education institutes the status of university without a need to go through the stages of college/university college for several years. This is possible if it is conceived, in the judgment of the Ministry, that the institute has the resources as well as institutional plans and vision in such a way that it can fulfill the requirements in a specific time period (FDRE 2009). It seems that the operating field is not a level one between private and public institutions. Public institutes opened by the Ministry automatically get the status of a university (since it is the Ministry that requests and approves the status). On the other hand, new private institutes get the status of a university based on the 'judgment' of the Ministry.

According to Ajayi (1996), as cited by Demissu (2008), institutional autonomy includes corporate freedom of universities from external interference (the freedom to design curricula, hire and fire staff, as well as admit and dismiss students without interference), participation of academic

community in the free selection of leaders and governing body members, and protection of the institute from threats to its autonomy coming from any sources (including prohibition of armed security forces from entering the institution's premises).

The autonomy of public institutes also remain under the condition that it is subjected to the power and responsibility of its board and the ministry. The appointment of the head and vice head of public institutes remained as the responsibility of the government than the institutes themselves under the revised proclamation. Even though a number of rights and obligations of students and staff members of such institutes was stipulated, a critical right of students, the right to get accreditation for the studies they have done seems to be missing.

Currently we are in the implementation period of the fourth sectorial strategic plan, ESDP-IV. The implementation period of ESDP-IV is from 2010/2011 – 2014/2015. Following the visions described in the five year economic plan of the government, the Growth and Transformation Plan (GTP), to achieve the status of becoming a middle income country by 2025, ESDP-IV suddenly shifted the attention of the education system onto science and technology. Particularly it proposed to effectively promote the policy of 70:30 higher education intake ratios in favor of science and technology (MoE 2010b).

The situation analysis of the outcomes of the ESDP-III period is reported by the ESDP-IV document. Accordingly, the number of public universities in the country reached twenty-two by the end of ESDP-III period

with thirteen additional ones been established during ESDP III. More than 50 private higher education institutions were also accredited by the end of ESDP-III period (MoE 2010b).

Key targets of the ESDP-IV with regard to higher education are increasing of transition rate to tertiary education from 81 to 95 percent, increase enrollment into government undergraduate programs from 185,788 to 467,445, boost share of female enrolment from 29 to 40 percent, shift intake ratio of Science and technology to Social Sciences and Humanities from 58:42 in 2008/09 to 70:30 by 2014/15, increase post-graduate enrolment from 4,878 to 16,100 including 3,000 at PhD level, increase the share of females in post-graduate programs to 25 percent from 10, improve the graduation rate to 93 percent from its current 79 percent. The plan also target to reach a staff to student ratio of 1:25 for science and technology, 1:15 for medicine and health sciences, 1:20 for agriculture and life sciences, and 1:30 for social and human sciences by 2014/15 (MoE 2010b).

Other key targets include increasing the number of teachers to 23,000, of whom 75 percent hold masters and 25 percent PhD. Furthermore, female teachers are expected to account 20 percent of the total size of teachers in higher education and those at top leadership position will increase from 3 to 16. The plan also aspires to have a full coverage of higher education institution in quality audits from its current 20 percent coverage. It is also planned to increase the number of technology institutes to 10 by the end of the planning period. In addition, there will be 2 science and technology universities (MoE 2010b). ESDP IV would like to expand the system by improving the enrolment capacity of the existing 22 universities

and by constructing nine new universities, still with special emphasis on programs in Science and Technology.

## Sectorial Developments

### Development of Public Institutes of Higher Education

By 1991, when the Derg regime falls, Ethiopia had only two universities. But by the beginning the new millennium this number has grown to six. Four universities, Debus, Jimma, Bahir Dar and Mekele have started their operation with university status in the 2000/01 academic year. Some of these institutes were established much earlier than this period and operated under Addis Ababa University before becoming universities on their own. Gonder College of Medical Science and Arba Minch Water Technology Institute were upgraded to university to increase the number of public universities to eight in subsequent years.

**Table 1: Regional Distribution of Public Higher Education Institutes by 2001.**

NO	NAME OF INSTITUTION	Year Established (G.C.)	Location	Distance from Addis (Km)
1	Addis Ababa University	1957/58	Addis Ababa	-
2	Alemaya University	1950/51	Oromiya	510
3	Debus University	1999/2000*	SNNPR	275
4	Jimma University	1999/2000*	Oromiya	335
5	Bahir Dar University	1999/2000*	Amhara	580
6	Mekele University	1999/2000*	Tigray	783
7	University of Gondar	1954/55	Amhara	750
8	Arba Minch University	1986/87	SNNPR	500

Source: Education Statistics Annual Abstract – MoE (2001)

\* These are the years that these institutes were officially inaugurated as Universities

Ten years later, Ethiopian public universities reached twenty-two following a number of constructions, expansions, restructuring and amalgamations of institutions of higher learning. Taking one example, Debu University broke into Hawassa and Dilla Universities. In addition a number of new universities have been constructed and started operation during the eleven year period from 2000/01 to 2010/11.

Looking at the regional distribution, it is clear that the government made efforts to distribute public universities with due consideration to regional equity. When considering the public universities only, Addis Ababa, Afar, Somali and Dire Dawa have one each, SNNP and Amhara have five each, Tigray has two and Oromiya has six.

**Table 2: Regional Distribution of Public Universities**

Region	Number of public universities
Oromiya	6
Amhara	5
SNNP	5
Tigray	2
Addis Ababa	1
Afar	1
Somali	1
Dire Dawa	1

Source: Data from Education Statistics Annual Abstract – MoE (2011); and authors' computations

Looking at the developments in the past eleven years (2000/01 to 2010/11), diploma programs in public universities phased out starting from 2005. In turn public universities upgraded their programs to degree level for almost all their regular, evening and summer programs. In addition to this, the universities have given a considerable attention to opening and expanding post-graduate programs. For instance, the oldest and the largest university in Ethiopia, i.e. the Addis Ababa University (AAU), currently has over 36 undergraduate degree programs and 220 graduate degree programs, out of which 69 are PhD and 151 masters. Haramaya University, which is also one of the oldest, has 50 degree, 50 masters and 13 PhD programs.

### **Development of Private Institutes of Higher Education**

The higher institution proclamation defines "private institution" as any non-public higher education institution established by one or more individual owners or by nonprofit making associations, founded as cooperative society or commercial association, or higher education institution established abroad and operating in Ethiopia (FDRE 2009).

According to the annual statistical abstracts of the ministry of education (MoE), only six private institutes of higher education reported enrollment in the academic year 2000/2001. These institutes are Ethiopian Adventist College, "Menshen Für Menschen" Foundation Agro-Technical Training College, Unity College, Africa Beza College, Alpha Education and Training Share Company Higher Institute of Distance Studies, and Microlink Information Technology College.

Ethiopia has a very infant private higher education sector which started with merely zero enrollments in 1998. The sector is characterized as small and dominated mainly by family-owned operators concentrated in the capital city, Addis Ababa (Nwuke 2008).

Eleven years down the road, from 2000/01 to 2010/11, the private provision of higher education has increased tremendously. The main indicator of this boom is the tenfold increase in number of accredited institutes from six to nearly 60 within these eleven years. This is without accounting for those opened and closed within this period. Private higher institutes are considered to help the government by increasing access to tertiary education and by filling some gaps that the state could not cover. According to Nwuke (2008) some resource, which otherwise would have been spent on public provision, is conserved and redirected to other development endeavors due to such institutes.

The private institutes on the other hand have their main campuses concentrated in Addis Ababa, even though some of them have branches in different locations. Based on the location of their main campuses, 38 out of 59 are in the capital Addis Ababa. SNNP follows Addis Ababa from far behind with 8 institutes followed by 5 in Tigray, 4 in Amhara, 2 in Oromiya and 1 each in Harari and Dire Dawa.

The geographic distortion of private institutions goes against the government's policy to reduce the spatial disparity among regions. Nwuke (2008) tried to explain this by mentioning three factors. The first is the fact that industrial and modern activities remain concentrated around Addis Ababa. The second is that private higher education institutes depend on revenues generated from tuition fees from those who are willing and able to



pay for it. Since Addis Ababa is the wealthiest region, it is logical to target this market. Finally, infrastructure related gaps raises the cost of doing business in ‘remote’ areas, hence making it more expensive for private providers to operate outside of the capital.

Looking at the dynamics in terms programs offered by private institutions, we can observe that these institutes started mainly by offering diploma programs. Eventually they have started opening undergraduate degrees and more recently post-graduate programs. The enrollment data from the statistical abstracts of the Ministry of Education (MoE) show that the private sectors started enrolling students for undergraduate degree programs in 2002/03 and for masters in 2008/09 academic years. Even though, these institutes continue to offer trainings at diploma level, this level is not considered as ‘higher education’ as per the higher education proclamations. Rather such trainings are considered as technical and vocational trainings.

### **Performance of the Higher Education Sub-Sector Budget**

Table 3 shows the trend of government budget allocated for education sector in general and for higher education in particular. The overall education system in Ethiopia gets a significant amount of the federal government’s budget. During 2000/01 to 2010/11, about 29% of the federal government’s budget went to the education sector. Furthermore, on average, the recurrent budget of the education sector took about 45% of the federal government’s recurrent budget and 23.6% of the federal government’s capital budget went to the capital budget of the education sector for the same period.

The budget that is particularly allocated to higher education has increased from time to time during the period under consideration. During

2000/01 the budget allocated to higher education was half a billion birr. After ten years, in 2010/11, its budget has grown to over six billion. This is an encouraging sign that the sub-sector is getting the attention of the government of Ethiopia.

**Table 3: Education Budget Composition**

Academic Year	Higher Education (In millions of Birr)			Education Total (In millions of Birr)
	Recurrent	Capital	Total	
2000/01	267	182	449	4,172
2001/02	325	224	548	4,311
2002/03	438	231	669	5,288
2003/04	533	257	790	6,173
2004/05	597	674	1,271	6,874
2005/06	732	1,318	2,051	8,383
2006/07	1,030	2,134	3,163	10,410
2007/08	1,296	1,151	2,447	12,011
2008/09	1,769	1,348	3,117	14,762
2009/10	2,586	1,778	4,365	17,249
2010/11	3,351	3,033	6,384	23,345

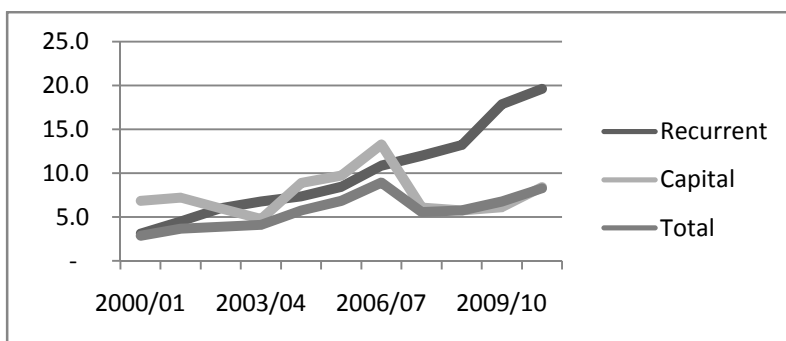
Source: Data from several issues of Federal Budget Proclamations and Ministry of Finance and Economic Development; and authors' computations

A number of developments took place during the period, including the expansion of the already existing universities as well as the establishment of new ones. About ten new universities were formed and a couple more

bud-out<sup>45</sup> as separate universities from the already existing ones. Furthermore, there are additional ten more institutes under construction to start operation in the near future. All these activities have implications in the dynamics of the budget allocated to higher education.

The share of the budget of higher education in the education budget shows an increment in general from where it started ten years ago. The share of the sub-sector in the overall federal government budget has also increased from 2.9% in 2000/01 to 8.3% in 2010/11, although there were several ups and downs in the trend during the period. The figure below shows the trend of the shares of recurrent, capital and total expenditures of higher education out of their counterparts in the federal budget.

**Fig 1: Share of Higher Education Budget in the Federal Government's Budget**



Source: Authors' computations based on data from Education Statistics Annual Abstract

The budget also trend shows that the sector is gradually getting the attention of the government. It is good news that the budget is on the rise. But the sub-sector is still getting a very low share of the budget as compared to the amount of expansion that it is going through. The upward bent of the

<sup>45</sup> Dilla from Debub University and Ambo from Jimma University

trend in 2006/07 is due to the expansion of the capital expenditure when the newly emerging universities were constructed and finalized. This shows that much of the investment in higher education is dedicated to building the infrastructure rather than running the facilities (the actual building human capital process). Without withstanding the fact that appropriate infrastructures are important for such facilities, it is also equally (if not more) important to focus and invest in the actual process of teaching as well as research activities of the institutions.

### **Teaching Staff**

Teachers of institutions of higher education play a major role in both teaching and research activities of the institution. With the kind of expansion and massification that Ethiopia is undertaking in the sector, it is challenging to get and attract qualified academic staff to these institutions. Institutions both in the private and public sectors tried to fill this gap by employing teachers both from the local and international market. Even though the number of expatriate teachers has remained low, below 15%, they played an important role during these expansions until the gaps were filled by Ethiopian teachers. The recent trends show that the dependency on expatriate teaching staff has started to fall down

**Table 4: Compositions of Teachers in Public Institutions**

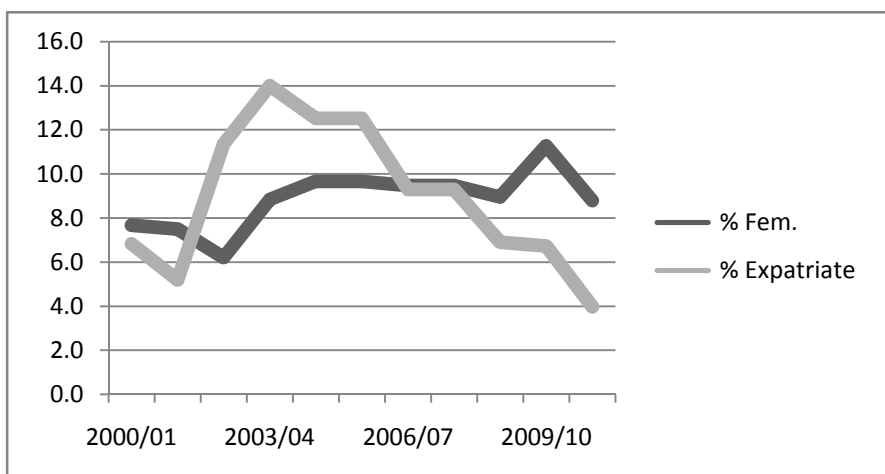
Academic Year	ETHIOPIAN		EXPATRIATE		TOTAL		% Female	% Expatriate
	Both Sex	F	Both Sex	F	Both Sex	F		
2000/01	2,755	194	202	33	2,957	227	7.7	6.8
2001/02	2,742	199	150	18	2,892	217	7.5	5.2
2002/03	3,097	176	397	41	3,494	217	6.2	11.4
2003/04	3,447	275	561	79	4,008	354	8.8	14.0
2004/05	3723	340	533	71	4256	411	9.7	12.5
2005/06*	3723	340	533	71	4256	411	9.7	12.5
2006/07	5250	468	538	80	5788	548	9.5	9.3
2007/08*	5250	468	538	80	5788	548	9.5	9.3
2008/09	8,841	744	655	106	9496	850	9.0	6.9
2009/10	13,176	1,465	950	126	14126	1591	11.3	6.7
2010/11	15,255	1,286	631	110	15886	1396	8.8	4.0

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

\* Data was not available for these years so the figures for the previous year are used

The number of female teachers in public institutions has remained low during the eleven years period from 2000/01 to 2010/11. The share of female teachers, both Ethiopian and expatriates, remained below 10% during this period, except in the year 2009/10. Of course, the number of female teachers has increased from 227 to 1,396 during this period but this increase did not change the proportion of female teachers. This suggests that a lot more effort is needed to be invested to achieve the target of reaching 20% as set by SDP-IV.

**Fig. 2: Trend of Share of Female and Expatriate Teachers (Government)**



Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

Table 5 shows the size and composition of teachers in private higher education institutes. As seen in the Table, the number of teachers in private higher education institutes had increased from just 275 to 1,516 during the eleven years period of our analysis. Unlike public higher education institutes, the proportion of expatriate staff had remained below 5% during the same period. Female teachers, on the other hand, have better representation in private higher education institutes compared to the public higher education institutes. During the period under study, the proportion of female teachers in private higher education institutions had nearly doubled.

**Table 5: Compositions of Teachers in Private Institutions**

Academic Year	ETHIOPIAN		EXPATRIATE		TOTAL		% Fem.	% Expatriate
	Both Sex	F	Both Sex	F	Both Sex	F		
2000/01	267	16	8	3	275	19	6.9	2.9
2001/02	408	29	13	4	421	33	7.8	3.1
2002/03	698	62	32	7	730	69	9.5	4.4
2003/04	771	94	24	7	795	101	12.7	3.0
2004/05	569	87	22	2	591	89	15.1	3.7
2005/06	569	87	22	2	591	89	15.1	3.7
2006/07	-	-	-	-	651	88	13.5	-
2007/08*	-	-	-	-	651	88	13.5	-
2008/09	1,504	232	28	4	1,532	236	15.4	1.8
2009/10	1,553	187	28	12	1,581	199	12.6	1.8
2010/11	1,493	195	23	13	1,516	208	13.7	1.5

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

\* Data not available for this year and the data from the previous academic year is used.

As the foregoing analyses portrayed, the number of teachers in higher education institutes had rapidly increased over the 2000/01 to 2010/11 period. However, while the rise in the number of teachers is useful, it is necessary to examine to what extent the rise in the number of teachers matches the rise in the number of students enrolled in these institutes. In this regard, Table 6 presents an overview of the trend in Pupil Teacher Ratio (PTR) in higher education institutes in Ethiopia. One short-coming of this analysis is that the data are only for full-time teachers working in higher

education institutes. As may be expected this underestimates the PTR figures reported in the table since considerable amount of teaching services is provided by part-time instructors in most higher education institutions. Having this limitation in mind, the figures reported in the table show that the number of pupil per teacher had nearly doubled during the 2000/01 to 2010/2011 period. *Ceteris paribus*, this implies that the opportunity for contact between the teacher and pupils had become limited over time due to greater rise in the number of pupil enrolled in higher education institutes.

**Table 6: Pupil Teacher Ratio (PTR) for Undergraduate programs - Public and Private**

Academic Year	Undergraduate Enrollment *	Full Time Teachers	PTR
	(a)	(b)	(a)/(b)
2002-03	58,026	4,224	13.7
2003-04	98,404	4,803	20.5
2004-05	138,159	4,847	28.5
2005-06	173,901	4,848	35.9
2006-07	203,399	8,355	24.3
2006-07	203,399	8,355	24.3
2007-08	263,001	-	-
2008-09	310,702	11,028	28.2
2009-10	420,387	15,707	26.8
2010-11	447,693	17,402	25.7

Source: Data from several issues of Ethiopian Education Statistical Abstracts

\* Enrollment in this context means all those undergraduate students who have registered for the first semester of the year (not necessarily new ones)



## I. Enrollment Trends

The number of newly enrolled students in higher education is one indicator of the growth trend of the sector. Ethiopia went through a huge expansion and massification in the higher education sector. This can be seen for instance from the more than 13 fold increase in enrollment of students in regular undergraduate programs of public universities. The total enrollment of students in regular undergraduate programs was 6,644 in 2000/01. This number reached 87,989 for the same program in 2010/11. Private institutions started enrolling students for undergraduate degree programs starting from 2002/03 academic year.

Enrollments in diploma level programs were reported under the higher education system until 2004/05. Afterwards, these programs were categorized under the technical and vocational education and training (TVET) programs following the 2003 higher education proclamation. The following table summarizes the enrollments in the regular diploma programs for both public and private institutions.

**Table 7: Enrollment in Regular Diploma Programs**

Academic Year	Public			Private		
	F	M	Total	F	M	Total
2000/01	1,520	4,644	6,164	3,698	7,477	11,175
2001/02	1,792	4,798	6,590	7,202	5,417	12,619
2002/03	2,283	7,769	10,052	3,750	3,971	7,721
2003/04	242	1,263	1,505	70	243	313
2004/05*	209	583	792	-	-	-

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

\* Date is not available for the private institutions

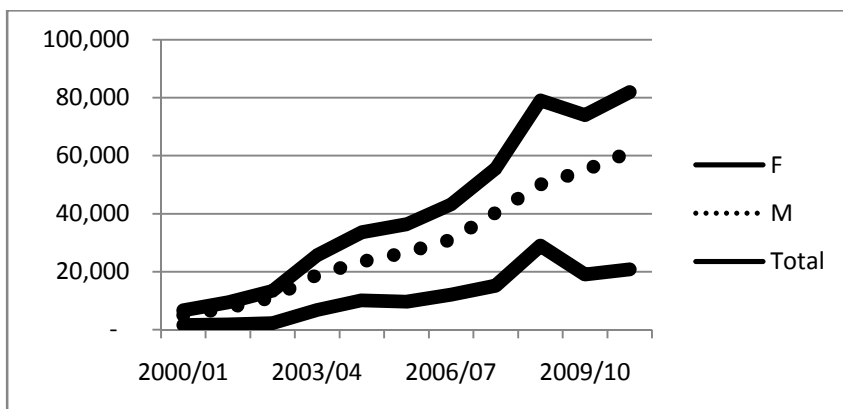
Regular undergraduate enrollments are important indicators of the dynamics in higher education. Taking the usual eleven years period between the academic years 2000/01 to 2010/11 as reference, regular undergraduate enrollment has shown a tremendous growth in public institutions. Private institutions launched such training only in 2002/03 academic year. This shows that the private sector has just started making contribution for the higher education sector in Ethiopia.

The total enrollment at degree level in 2000/01 is only 8.1% of the enrollment in 2010/11, meaning that it has grown by more than 13 fold. The enrollment for private institutions has also increased from a mere zero to more than six thousand during this period. Despite the remarkable achievement of increasing access to higher education, the gender imbalance is still persisting within public institutions. The enrollment rates seem to increase with similar trends for both male and female students with the exception of the academic year 2004/05<sup>46</sup>. It is important to find ways to shift the trend of female enrollment in order to close the gap between male and female students at enrollment.

### **Fig. 3: Trend of Enrollment in Public Institutes by Sex**

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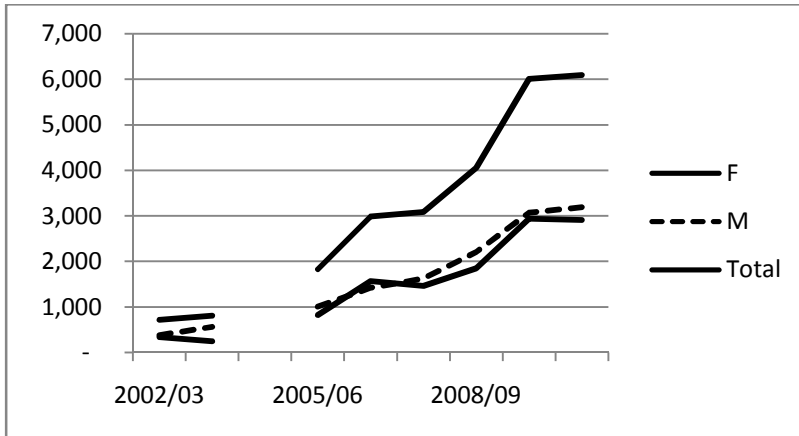
<sup>46</sup> The trend is different for this year due to the fact that the ministry has decided to enroll all female students who sat for university entrance examinations regardless of their results



Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

The case of private institutions seems to be different from that of public when it comes to gender equity. During our reference period the percentage of female students among the total did not fall below 31% and averaged at 46%. During 2006/07 their share in enrollment has reached 52%, which is probably a first time in Ethiopia for enrollment of females in undergraduate programs to exceed that of male. This shows that private institutes are much better in giving equal access for both male and female students despite the fact that they only account for less than 10% (around 5.5% on average) of the total enrollment. Even though the numbers of students enrolled at private institutions are very small as compared to public institutions, their performance in terms of gender equity is much better than that of public given their young age.

**Fig. 4: Trend of Enrollment in Private Institutes by Sex**



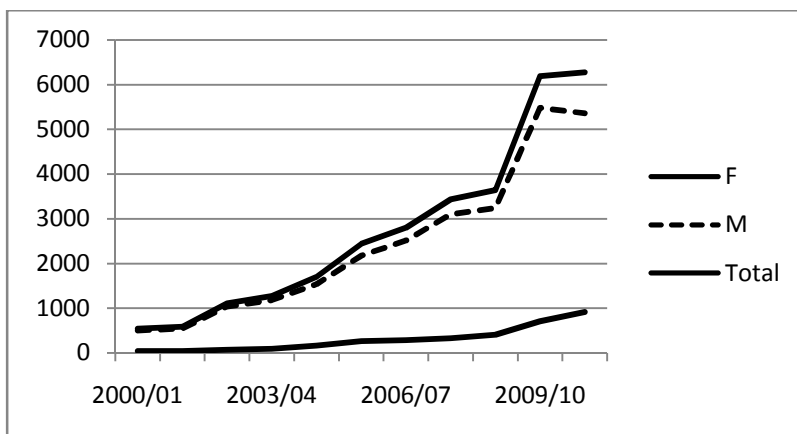
Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

From its first launch in 1978 by Addis Ababa University (Amdissa 2009), post-graduate training has achieved several milestones. These achievements include the launching of several new masters and PhD level trainings by the different public institutions as well as, more recently, private institutions. Enrollment in masters and PhD level programs by public institutions has reached more than six thousand by the year 2010. The program has gained more attention recently due to the aggressive expansion plan of the government to expand higher education. Post-graduate trainings are given the special mission of training teachers for the emerging universities.

The renewed focus to graduate trainings can be seen from the fact that the number of students enrolled in such a program has increased from 543 to 6,271 (more than tenfold) during the eleven years period of 2000/01 to 2010/11. Graduate trainings need more resources in terms of human (highly qualified professors), infrastructures (computer labs, internet, laboratories, and libraries) as well as materials (instruments, chemicals,

books, etc.). Such an aggressive expansion, though it is necessary to fill the need for teaching staffs in new universities, might compromise the quality of education that the students receive and the quality of research they conduct.

**Fig. 5: Trend of Post-Graduate Enrollment in Public Institutions**



Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

The gender gap among students in graduate programs is even much more worth than that of undergraduate. The gap seems even to increase more recently. In the academic year 2009/10 the enrollment in graduate programs nearly doubled. This increase in enrolment has shifted the trend of male students further away from that of females and aggravated the imbalance furthermore.

Graduate training at private institutions is a recent phenomenon. According to the enrollment data, it has started in the 2008/09 academic year. Although regular private post-graduate program is at its infancy, such interventions by the private sector could play important role in helping the government save some of its resources to be reallocated into areas where it is

most needed. In addition to sharing the government’s burden of giving training at graduate level, there is a relatively smaller gender imbalance in the graduate enrollments of private institutions. Women in private institution’s graduate programs account for 33% of the enrollment on average (ranging between 16 and 64 percents) while that of public universities average at 9.8% with a range of 6 to 15.

**Table 8: Post-Graduate Enrolment in Private Institutes**

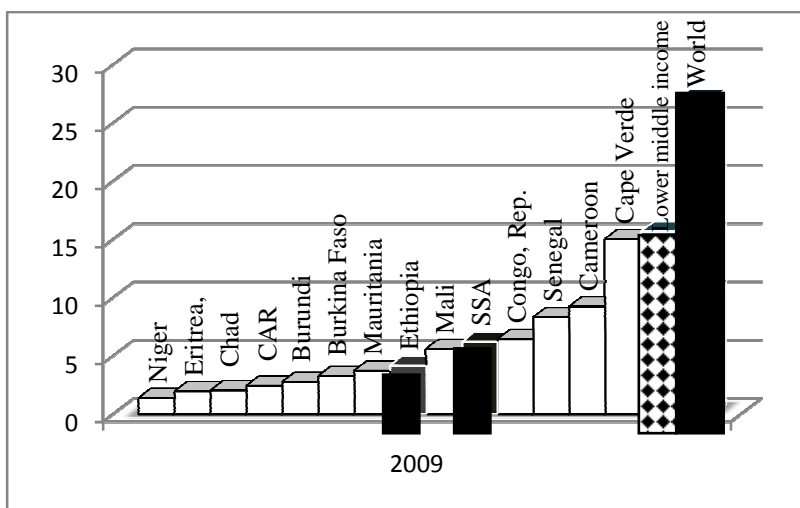
Year	M	F	Total	% Female
2008/09	53	10	63	15.9
2009/10	112	26	138	18.8
2010/11	58	104	162	64.2

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors’ computations

Private institutes are performing better than public institutes in terms of reducing gender gap in enrollment, both for undergraduate and graduate. This calls for further analysis into the issue to draw lessons and formulating policy to close the gender gap among students of higher education. Gross enrollment ratio (GER) is a commonly used indicator to make cross-national comparison of higher education student enrollment. GER is defined as the ratio of total enrollment, regardless of age, to the total population in the five year age group that is expected to be in tertiary level. Fig. 6 portrays the GER of some selected Sub-Saharan African (SSA) countries. The GER shows wide variation in SSA. The lowest and highest performers in relation to tertiary education GER in SSA in 2009 were Niger (1.42%) and Cape Verde (15.05%). Ethiopia’s tertiary education GER (4.19%) seems to be close to the average for Sub-Saharan Africa as a whole. It is important however that tertiary GER for SSA is far behind the average tertiary GER for lower

middle income countries (15.7%). As may be expected, tertiary education GER of SSA and developing countries lags behind tertiary education GER of most advanced countries. For instance, in 2009 the tertiary education GER for the United States was 89%, Sweden 71%, UK 59% and Euro area 60%.

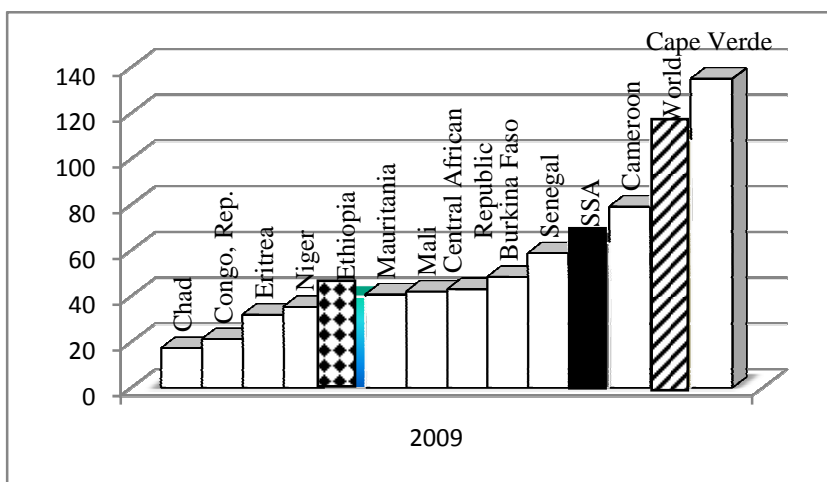
**Fig. 6: Gross Enrollment Ratios of some selected Sub-Saharan African countries**



Source: World Development Indicators (<http://data.worldbank.org/indicator/SE.TER.ENRR>); and authors' compilation

In terms of gender equity, Ethiopia's tertiary education GER seems to perform less well compared to other countries in SSA. In other words, tertiary education in Ethiopia is less accessible to girls. In 2009, for instance, there were only 39 female students enrolled in tertiary education for every 100 male students enrolled. In contrast, SSA had on average 63.3 female students enrolled in tertiary education for every 100 male students enrolled at the same level. The world average stood at 108.2 females students enrolled in tertiary education for every 100 male students enrolled.

**Fig. 7: Ratio of Female to male tertiary enrollment for selected Sub-Saharan African countries, Sub-Saharan average and World average**



Source: World Development Indicators

(<http://data.worldbank.org/indicator/SE.ENR.TERT.FM.ZS>); and authors' compilation

### **Graduates**

The main output of the higher education system is its graduating students and its research outputs. Due to limitation of data, we only focus on graduates to analyze the output trends of the Ethiopian higher education sub-sector. Since diploma level trainings have been transferred to technical and vocational education and training (TVET) programs since 2004/05, our report covers the period from 2000 to 2005 for this program. The table below presents the details of the number of graduates from the diploma programs of both public and private institutions disaggregated by gender.

**Table 9: Graduates of Diploma Programs**



<b>Diploma Government</b>						
Academic Year	Regular			Continuing Education <sup>47</sup>		
	F	M	Total	F	M	Total
2000/01	793	3,681	4,474	1,145	3,839	4,984
2001/02	962	3,831	4,793	1,025	3,729	4,754
2002/03	1,268	4,380	5,648	1,616	5,764	7,380
2003/04	1,714	5,948	7,662	2,317	7,145	9,462
2004/05	244	1,446	1,690	1,823	5,525	7,348
<b>Diploma Private</b>						
Academic Year	Regular			Continuing Education		
	F	M	Total	F	M	Total
2000/01	924	1,661	2,585	299	476	775
2001/02	1,413	1,918	3,331	474	475	949
2002/03	2,691	4,279	6,970	964	1,080	2,044
2003/04	3,998	3,643	7,641	2,107	1,974	4,081
2004/05	1,124	574	1,698	935	759	1,694

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

In line with the increased enrollment, the number of degree graduates of public institutions has also increase in a tremendous amount. Particularly in the academic year 2005/06 the number almost tripled from that of 2004/05 for regular undergraduate degree graduates. The academic year 2005/06 is the year where most of the first batches of the new curriculum have graduated. Overall, the number of graduates from regular undergraduate degree programs has increased from close to four thousand to more than forty-one thousand, which is more than tenfold.

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<sup>47</sup> Continuing education program includes evening, distance and summer programs.

**Table 10: Graduates from Undergraduate Degree Programs from Public Institutions**

Academic Year	Regular			Continuing Education		
	Total	F	% Female	Total	F	% Female
2000/01	3,882	493	12.7	879	170	19.3
2001/02	3,349	350	10.5	898	154	17.1
2002/03	4,798	472	9.8	1,344	180	13.4
2003/04	4,965	629	12.7	2,253	314	13.9
2004/05	7,380	961	13.0	3,388	638	18.8
2005/06	21,371	3,087	14.4	3,227	769	23.8
2006/07	23,367	4,077	17.4	6,034	1,121	18.6
2007/08	26,839	4,736	17.6	12,465	2,665	21.4
2008/09	31,926	6,131	19.2	11,881	3,727	31.4
2009/10	38,174	8,042	21.1	15,700	3,577	22.8
2010/11	41,514	12,315	29.7	23,134	4,380	18.9

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

Not surprisingly, the number of graduates is also dominated by male graduates. On the average, female graduates account for 16.2% in regular and 20% in continuing programs. The number of female graduates go as low as 9.8% and as high as 29.7% for the regular program while that of continuing program range between 17.1% to 31.4%.

As mentioned earlier, private higher education provision is a recent phenomenon. Degree programs have started in these institutes even later than their commencement of operation. According to the statistical abstracts of MoE, the first degree graduates from private institutions were reported to graduate in 2002/03. There were only 152 graduates out of which one third

were female. In 2010/11 the number of graduates with undergraduate degrees from the regular programs of private institutions has reached 3,528. This number might seem very small as compared to the more than forty-one thousand of the public institutes but this is as many as what public institutions has graduated by the year 2000 despite their half a century experience. The gender distributions among the graduates from private institutions also seem to be better than that of the public. Even though there is still a gap in the number of male and female graduates, the gap is much narrower in private institutions.

Similar to the trends in enrollment as well as graduation at undergraduate programs, the number of graduates from post-graduate programs has increased particularly starting from 2005/06. The expansion projects in the higher education sub-sector have contributed greatly to this growth. The inception and establishments of new universities created a huge demand for teachers trained at post-graduate levels. In response to this, the government has given its attention for the strengthening and expansion of such programs in different universities.

Academic	Regular	160	Continuing Education
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	Total	F	% Female	Total	F	% Female
2002/03	152	53	34.9			
2003/04	382	211	55.2			
2004/05	598	232	38.8	169	58	34.3
2005/06	512	177	34.6	322	91	28.3
2006/07	225	73	32.4	219	100	45.7
2007/08	950	305	32.1	7,725	2,225	28.8
2008/09	2,573	1,127	43.8	9,729	5,774	59.3
2009/10	3,050	1,406	46.1	10,075	2,674	26.5
2010/11	3,528	1,596	45.2	7,172	2,274	31.7

**Table 11: Graduates from undergraduate degree programs from private institutions**

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

During the twenty-two years period from its launch in 1978 to 2000, post-graduate training has reached only to graduating less than four hundred students. But in just one decade starting from 2000/01 this level has grown to exceed five-thousand. Much of this expansion is achieved in the masters programs. The PhD studies are still lagging behind.

**Table 12: Graduates from Post-Graduate Degree Programs from Public Institutions**

Academic Year	Masters			PhD		
	F	M	Total	F	M	Total
2000/01*	30	360	390			
2001/02*	33	411	444			
2002/03	41	429	470	1	3	4
2003/04	51	684	735	1	0	1
2004/05	101	1,025	1126	0	0	0
2005/06	136	1,245	1381	0	7	7
2006/07	259	2,402	2,661	0	10	10
2007/08	283	2,362	2,645	1	18	19
2008/09	399	3,017	3,416		15	15
2009/10	625	3,875	4,500	18	131	149
2010/11	819	5,057	5,876	1	20	21

Source: Data from several issues of Ethiopian Education Statistical Abstracts; and authors' computations

\* Data includes both Masters and PhD graduates

## Conclusion

The Ethiopian higher education sub-sector has a relatively longer history as compared to its neighbors in Sub Saharan Africa (SSA). During its more than six decade history it has gone through a number of changes. The sub-sector strived to provide education at the highest international standards during its earlier days. This limited the number of students who got access to higher education and resulted in a huge wastage. During the Dege regime (1974 to 1991) higher education suffered from government interventions to impose its socialist ideologies. These interventions and meddling of the government in the education system had forced a number of academic staffs to flee the country.

The post Derg period (the transitional government of Ethiopia and the current federal government) had also played its fair share in upsetting and expelling a large number of experienced professors from its universities. But more importantly, the sector went through a huge expansion and massification during this period. Until the recent decades, higher education in Ethiopia was a sole responsibility of the Government and was a closed ground for the private sector. Through the Education and Training Policy (ETP) of 1994, the private sector was granted access to invest in the sector. Higher education proclamation has also been ratified for the first time in the country's history in 2003. The proclamations put the participation of the private sector in higher education on a firm ground by giving a legal base for the private institutions.

Focusing on the recent decade only, we have noticed that the sector has achieved a number of milestones in its size and distribution. Prior to 2000, institutions of higher education were only few in number, located only in limited parts of the country and had a very small number of student enrollment. Most of these changed in the past eleven years since then. Currently there is at least one public university in all the regional states, except for Harari, Benishangul-Gumuz and Gambella, the number of public universities has increased from 6 to 22 and ten more are under construction, budget allocation to higher education as a share of the education sector has grown and enrollment has increased with more than tenfold.

Despite the remarkable achievements in the areas mentioned above, there are a number of issues that the government should address in order for the sector to make a significant contribution for the country's human capital

development. Our suggestions and recommendations particularly focus on two aspects, policy environment and quality.

### **Policy Environment**

Education policies and regulating directives should be consistent, predictable and participatory. If policies are formulated in this manner, they will be able to build the confidence of the private sector to invest its resources in higher education and help the government achieve the goals it has set for the sector. Education is a process which needs a long term commitment and long term investment in order to bring the desired returns both at individual and state level. Such long term commitments are made based on consistent systems. This consistency is also important for individual students and staffs as well. Individuals, both students and academic staffs, make career decisions based on current facts and future prospects. Hence, the stability of the system plays an important role in investment decisions of institutions as well as individuals.

Recent events around higher education have some worrying trends. For instance the ministry had issued a directive that banned distance education<sup>48</sup> in all higher education institutions and trainings in the fields of teachers training and law by private institutions on quality basis<sup>49</sup>. This directive came as a surprise for the private sector since the ministry did not give any signal that this might happen. The ministry and the agencies under it have the responsibility to ensure minimum quality and standards. But the process of ensuring quality should involve all stakeholders. Stakeholders should be part of the decision making process, they should know what is

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<sup>48</sup> Distance education was as one major strategy for promoting formal and non-formal education in ESDP-II

<sup>49</sup> This ban has recently been eased for some institutions after some quality audit

expected from each one of them and be able to evaluate their status against these minimum standards. For instance, private institutions should know the requirements they need to satisfy and when. They should also be able to predict the possible consequences (banning, conditional approval, approval, etc.) that they probably face given their current status. In other words, any decision coming from the ministry should not come as a surprise for any institute.

If the government really believes in the importance of the role that the private sector plays in expanding access to higher education, it should create a sense of partnership with the private sector and involve them in the process of developing policies and directives as well as their implementation. Given the complex and dynamic nature of the sector, stakeholders should attempt to work together and formulate policies and guide directives that will be flexible enough to account for these complexities while ensuring minimum standards. This way the government can boost the confidence of the private sector so that more investors will join the sector as well as make longer commitments. The expansion of the private sector will in turn help the government by freeing its resources that would otherwise be invested in expanding higher education further in addition to the tax revenue that the sector generates to the government.

### **Quality and Relevance**

Enrollment and graduation figures show the rapid expansion and massification of higher education, particularly in the last decade. As suggested by recent researches, it is right for developing countries, such as Ethiopia, to pay appropriate attention to the expansion of the sector. But, pushing the sector well beyond its natural growth rate may severely damage



its quality. Rapid growth of even experienced universities poses a number of challenges to the institutions. These challenges could be in the form of shortage of class rooms, shortage of appropriately trained and experienced professors, creating larger class sizes where individualized attention to a student is very difficult, availability of library space, adequate availability of text book and reference materials, adequate access to computing facilities, adequate laboratory equipments and supplies, etc. Such a pressure erodes the already existing quality of such institutions.

The challenge is even stronger for newly emerging universities. Since these universities have started enrollment while they were under construction, they started operation with incomplete facilities. Being located away from the capital city, their incomplete, hence unattractive facilities as well as the lower payments that academic staffs receive as compared to what the market offers (such as employment in private businesses, NGOs, etc.), it is difficult for such institutions to have a good academic staff.

The government has given the attention that the sector deserved and it has allocated a significant amount of resources to the sector. But this is not enough. It is difficult to scale up while maintaining certain standards. Since the products of such investments are human capital, it needs time for the investment to sink in, to train new university instructors and build the internal capacity of the institute to provide all the necessary services that it should.

It is a commendable effort to consider regional equity while locating universities. But it is also equally important to wisely make such

investments. For instance there are five universities in Amhara and SNNP regions each and six in Oromiya. It might be wise to have fewer, larger in size and academically stronger universities than many small and inferior ones. This way the government could optimize the use of its resources and gain the benefits of economies of scale. It satisfies both the need for equity distributing universities among regions as well as building a much more strong and efficient ones. In the current approach, even if the sum of the financial resources invested is very high, it grows thin when it is distributed among the many universities.

The government should also pay attention on the market for trained manpower. Universities and the ministry should conduct gap analysis between the trainings offered at the universities and what is actually needed in the market. They should periodically check what the needs of the organizations that are going to employ graduates from the different universities are. For instance, such decisions as the policy to promote the 70:30 higher education enrollment ratios in favor of science and technology should be informed by such gap analysis studies. These studies should also be able to identify the specific skills needed in the labor market in addition to the general trainings that universities commonly offer. If there is a significant mismatch between the market and the trainings, then the result will be a large number of unemployed graduates, hence a waste of the limited resources that the country cannot afford to lose at this time.

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